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Technical Data Sheet

GN 156

Photo-Curing Adhesive for Common Plastic Bonding

Product Description

GN156 is a photo-curing adhesive designed for common plastic (including ABS, HIPS, PS, PC, PVC, and acrylic) bonding. The viscosity of this product is extremly low while the permeability is excellent. This resin is colorless and transparent in thin film bonding. Under either UV or visible lights, this adhesive is able to cure rapidly and demonstrates excellent adhesion strength. In many applications, cured product shows a significantly better adhesion strength than original materials, such as anti-ultraviolet acrylic and PC surfaces. Through the excellent performance, this resin is reliable photo-curing adhesive.

Features

1. This product has high permeability, good toughness, shock resistance, and thermal shock resistance.
2. This resin is able to react with substrate and exhibit high adhesion strength.
3. This product is an excellent solution to problems of bonding plastics in various applications.
4. This product complies to the 2011/65/EU RoHS regulations.

Typical Uncured Properties

	GN156
Appearance	Liquid
Color	Colorless
Viscosity 25°C, S21 100rpm, cps	5~15
Refractive Index n_D	1.4769
Solid Content, %	0
Heavy Metal Content, %	0

Typical Curing Properties

Recommended Wavelength, nm	310~365
Minimum Light Intensity, mW/cm^2	> 50
Minimum Light Energy, mJ/cm^2	1,000~2,000

Direction of Use

1. Clean the contact surface until it is free of dirt, grease or mold release. Generally, a simple solvent wipe is sufficient.
2. Real curing time depends on various fators, such as part geometry, materials to be bonded, bondline thickness and efficiency of the UV light. Confirm the real curing time and conditions with actual production parts and equipment.
3. Please standardize the UV lamp intensity and illumination. Over-exposure will not affect the product quality; however, under-exposure will severely change the resin properties. When under-exposure, the resin may have lower reaction rate and may not pass the envrionmental test experiments.
4. This product may cause skin irritation to sensitive personnel.

Typical Cured Properties

Glass Transition Temp.(MDSC), °C	-10
Durometer Hardness, Shore D	64
Elongation, %	228
Working Temperature Range, °C	-40~100

Tensile test on the machine Test piece bonding method:

Specimen material：PMMA/PMMA
Specification：long 76.2mm × width 25.4mm× thick 2mm；
Try to control the glue area<1 cm^2

Specimen name	Specimen area cm^2	Maximum strength kgf	Adhesion strength kgf/cm^2	Description of substrate fracture
GN156	0.86	79.90	92.61	PMMA fracture
GN156	0.84	39.14	46.61	Degumming
GN156	0.88	36.59	41.40	PMMA fracture
GN156	0.74	42.11	57.17	PMMA fracture
Average	0.83	49.44	59.45	

Storage and Shelf Life

This resin should be kept without any possibility of moisture and heat exposure. Replace the lid immediately after use to prevent possible light exposure. Shelf life of this product is one year when stored under shades, room temperature (14~34°C), and in sealed containers.

Caution

Some findings indicate a lack of potential for carcinogenicity with the compositions of this product by long term recurrent application to the skin. However, direct contact with the skin is likely to produce mild transient reddening and allergic reaction. If contacted directly, remove the adhesive from skin with soap and water thoroughly. DO NOT use solvents for cleaning hands. This product is of moderate acute toxicity by swallowing. If swallowed, contact the hospital immediately. Avoid any contact with eyes. In case of contact, flush with water for at least 15 minutes and get medical attention immediately. For specific information on this product, consult the Material Safety Data Sheet.

The data contained in this bulletin is provided only as a guide for evaluation/consideration. These material characteristics are typical properties that are based on a limited number of samples tested in the laboratory. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the use's responsibility to determine suitability for the user's purpose of any product or method. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.